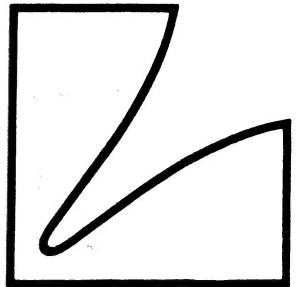
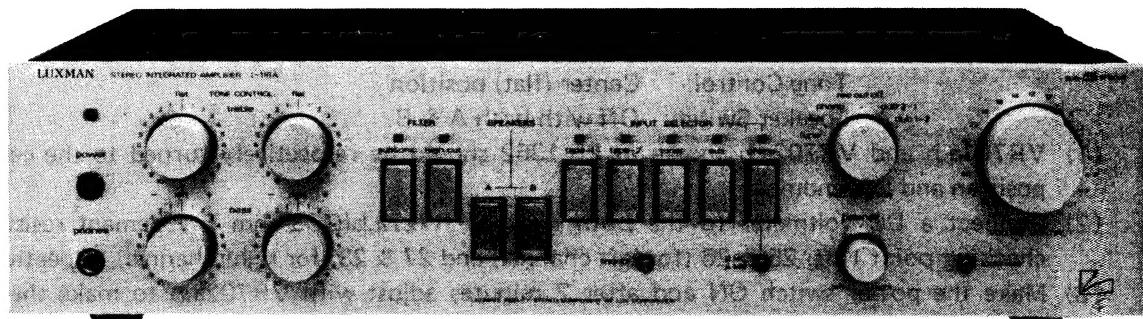


# SERVICE MANUAL



LUXMAN SOLID STATE STEREO  
INTEGRATED AMPLIFIER *L-116A*



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## L-116A ALIGNMENT PROCEDURES

### L-116A Alignment Procedures

#### 1) Idling Current Adjustment

Setting condition — Volume Control: minimum

Tone Control: Center (flat) position

Speaker Switch: Off with both A & B.

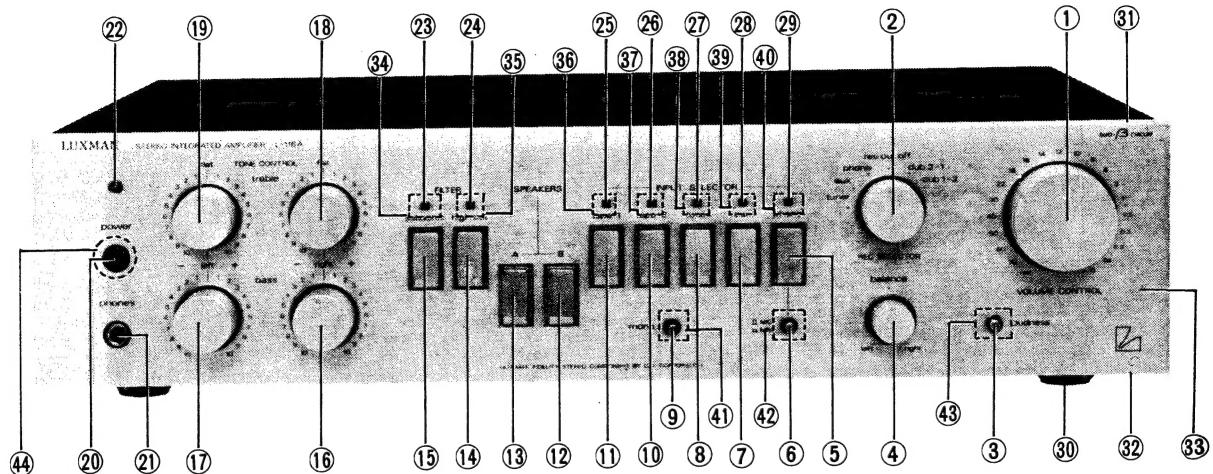
- (1) VR701a.b and VR702a.b shown in PB-1362 should be respectively turned to the center position and left-endmost.
- (2) Connect a DC voltmeter to the both ends of R727a.b(0.33-ohm 5W cement resistor), checking point Nos. 25 & 26 (for left channel) and 27 & 28 (for right channel) respectively.
- (3) Make the power switch ON and after 2 minutes adjust with VR702a.b to make the DC voltmeter connected in above-mentioned procedure (2) read 33mV.

#### 2) Center Voltage Adjustment

- (1) Connect a DC voltmeter to the right and left channels of the spaker terminal "A" respectively.
- (2) Push the speaker switch "A" and adjust with VR701a.b to make the DC voltmeter connected in above-mentioned procedure (1) read 0V.

\* The affix a.b of VR701a.b & VR702a.b stands for right and left channels.

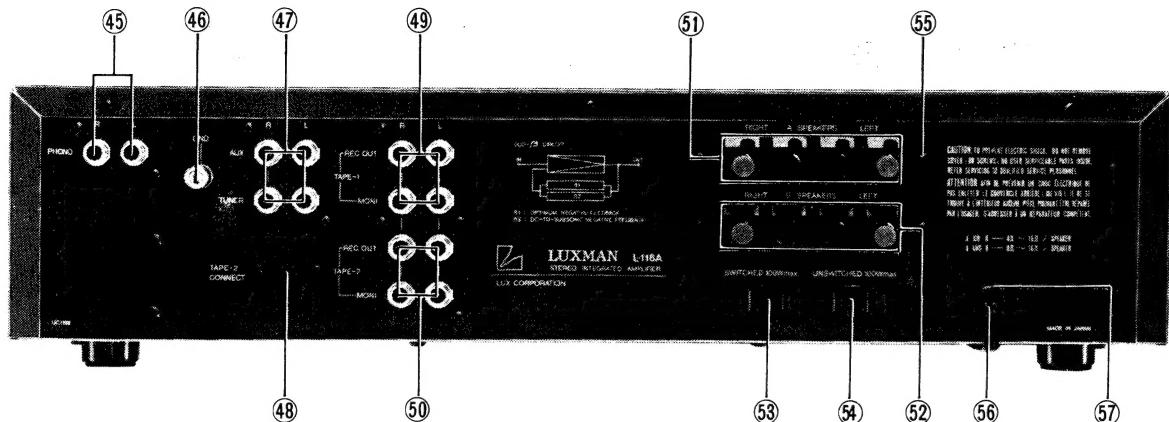
## FRONT VIEW



## PARTS LIST(COSMETIC)

SYMBOL NO.	STOCK NO.	DESCRIPTION	REMARK	SYMBOL NO.	STOCK NO.	DESCRIPTION	REMARK
(Knob)							
1	WH1105	Volume Control		11	WJ1142P	Tape-1	
2	WH1117	Rec Selector		12	WJ1142P	Speaker-B	
3	WJ1145	Loudness		13	WJ1142P	Speaker-A	
4	WJ1118	Balance Control		14	WJ1142P	High Cut	
5	WJ1142P	Phono		15	WJ1142P	Subsonic	
6	WJ1145	Phono MC.MM Selector		16	WH1117	Bass Control Right	
7	WJ1142P	Aux		17	WH1117	Bass Control Left	
8	WJ1142P	Tuner		18	WH1117	Treble Control Right	
9	WJ1145	Mode		19	WH1117	Treble Control Left	
10	WJ1142P	Tape-2		20	WJ1133	Power	
(LED)							
22	TD0196	SLR-30UR, Pilot		(Head Phone Jack)			
23	TD0223	SEL1910A, Subsonic		21	AJ0014	LJ-264-1-7	
24	TD0223	SEL1910A, High Cut		(Case Ass'y)			
25	TD0222	SEL1710K, Tape-1		30	WN0007	Foot	
26	TD0222	SEL1710K, Tape-2		31	UG1032	Bonnet 1032	
27	TD0222	SEL1710K, Tuner		32	UE1107	Bottom Plate 1107	
28	TD0222	SEL1710K, Aux					
29	TD0222	SEL1710K, Phono					
(Front Panel A'ssy)							
33	WA1226	Front Panel 1226					
34-40	WE1097	Protector 1097					
41	WE10951	Protector 1095 1/2					
42	WE10951	Protector 1095 1/2					
43	WE10951	Protector 1095 1/2					
44	WE1089	Protector 1089					

## REAR VIEW



## PARTS LIST

SYMBOL NO.	STOCK NO.	DESCRIPTION	REMARK
(Terminal)			
45	AT0120	Input 2P, Phono	
46	AG0048	Ground	
47	AT0122	Input 4P, Aux Tuner	
48	AS0205	DIN	
49	AT0109	Input 4P, Tape-1	
50	AT0109	Input 4P, Tape-2	
51	AT0080	Speaker A	
52	AT0080	Speaker B	
(Bushing)			
*57	BU0033 BU0039	SR-4N-4 SR-5N-4	EK EZ SK EG SG

SYMBOL NO.	STOCK NO.	DESCRIPTION	REMARK
(Extra AC Outlet) E Only			
*53	AC0010	MD-40 Switched	E
*54	AC0010	MD-40 Un Switched	E
(Rear Panel)			
*55	UC1198 UC1197	Rear Panel 1198 Rear Panel 1197	E S
(Power Cord)			
*56	BK0018 BK0022 BK0023	A-18BF C2-461-B SAA Mini	EZ EK SK EG SG

\*Note: In this manual the parts, which differs depending on destination and mains voltage, are classified indicated as follows:

EZ: 120V For North America, South East Asia,  
Middle East Asia, Middle South America

E EK: 220V For Europe, South Asia, East Asia,  
Middle East Asia, Middle South America

EG: 240V For England, Australia, New Zealand

S SK: 220V For Europe, South East Asia, South America  
SG: 240V For England, Oceania

\* E Type All With Line Voltage Selector

# MECHANISM

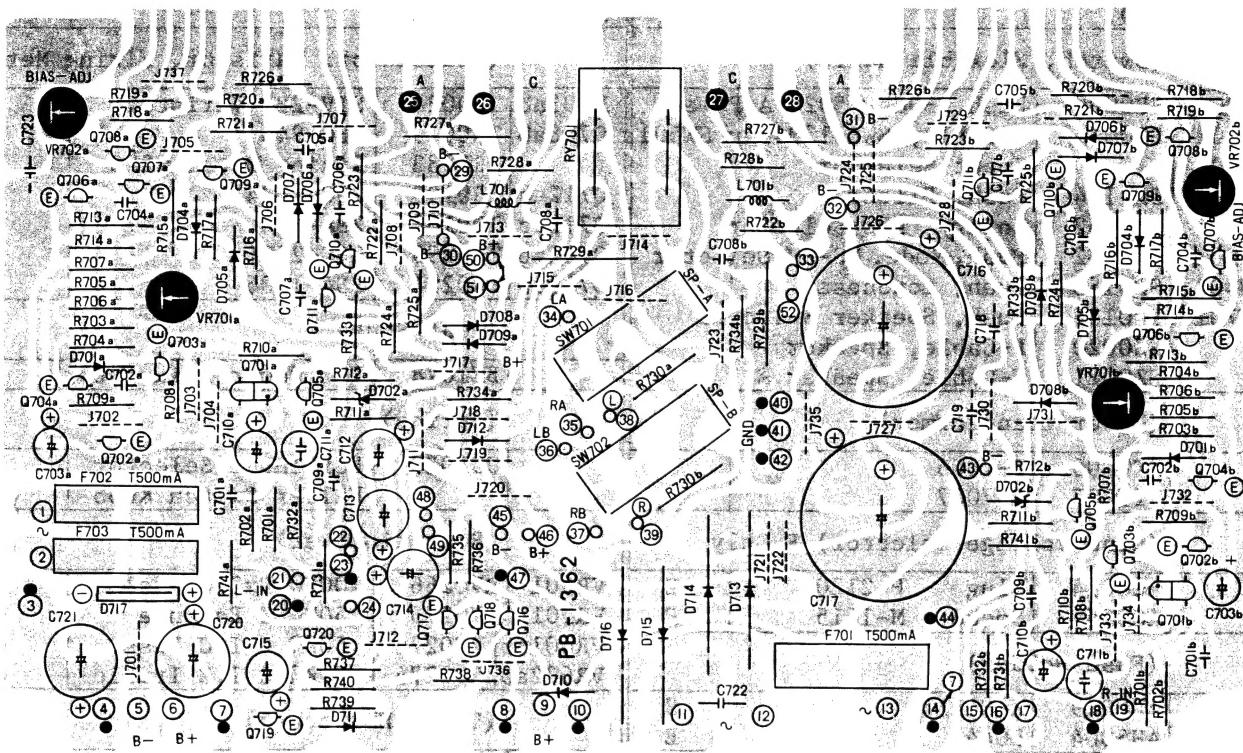
SYMBOL NO.	STOCK NO.	DESCRIPTION	REMARK	SYMBOL NO.	STOCK NO.	DESCRIPTION	REMARK
(Switch, Flexible Cable)				(Transistor, Varistor, Fixing Metal)			
SW001	SP0090	Push, SDG5P-502 5A Power		D703ab	TV0026	STV-2H, Varistor	
SW101	SZ0016	F-Cable, SWR-1204 For SW501		Q708ab	TR0029	2SC-945	
SW201		Input Selector		UR1283		Fixing Metal 1283	
SW207	SP0184	Push, Filter		Q712ab	TR0190	2SC-1624	
SW301	SR0152	Rotary, Rec Selector		Q713ab	TR0188	2SA-814	
SW501	SP0182	Push, Mode, MC-MM Selector		Q714ab	TR0295	2SC-2581	
SW502	SP0183	Push, Loudness		Q715ab	TR0294	2SA-1106	
SW701	SP0185	Push, Speaker Selector		(Heat Sink)			
	SZ0020	F-Cable, Speaker B		BE1078		For Power Transistor	
	SZ0021	F-Cable, Speaker A		(Spring)			
(Power Transformer)				UU1038		For Input Selector Filter Switch Knob	
(Line Voltage Selector) E Only				(Potentiometer)			
*	PT7006	Plug P-2120	E	VR001	RV0266	100KΩ Bx2 CT Volume	
	PT7007	P-7007	E	VR501	RV0275	250KΩ Z Balance	
*	AC0014	Socket M-1615	E	VR601ab	RV0276	50KΩ C T.C Bass	
*	AC0054			VR602ab	RV0276	50KΩ C T.C Treble	
(Fuse Holder)				(LED, LED Socket)			
*F001	AH0019	X-N1153	S		TD0196	SLR-300UR Pilot	
	AH5004	H0445	E		AS0206	Socket, L: 250mm	
(Fuse)				D401	TD0222	Yellow, Phono	
*F001	BF0210	5 x 20 2A(T)	EK.S	D402	TD0222	Yellow, Aux	
	BF0213	5 x 20 4A(T)	EZ	D403	TD0222	Yellow, Tuner	
F701	BF0206	5 x 20 500mA(T)		D404	TD0222	Yellow, Tape-2	
F702	BF0206	5 x 20 500mA(T)		D405	TD0222	Yellow, Tape-1	
F703	BF0206	5 x 20 500mA(T)		D406	TD0223	Orange, High Cut	
				D407	TD0223	Orange, Subsonic	
(Packing Material)							
	XB1046	Pad A 1046					
	XA1287	Carton 1287					
	ME0190	Owner's Manial					

#### Notes:

Flexible Cable Switch Ass'y can be disintegrated into 3 components-Switch Body, Flexible Cable, Switch Mechanism. In this list, the respective disintegrated Components are classified into the categories.

Switch Body - PCB Unit Parts List  
 Flexible Cable - Mechanism Parts List  
 Switch Mechanism - Mechanism Parts List

## PB-1362POWER AMP. PROTECTOR



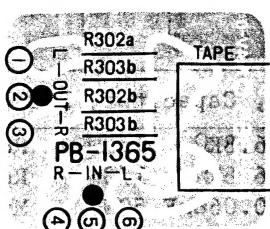
## PB-1362 PARTS LIST

SYMBOL NO.	STOCK NO.	DESCRIPTION		REMARK	SYMBOL NO.	STOCK NO.	DESCRIPTION		REMARK
(Resistor) Unit: $\Omega$									
R111ab	RD0461	2.7K	1/3W	Rd	R721ab	RS2508L	47	1/2W	Ro
R701ab	RD0430	1M	1/3W	Rd	R723ab	RS2565L	360	1/2W	Ro
R702ab	RD0466	1K	1/3W	Rd	R723ab	RS2565L	360	1/2W	Ro
R703ab	RS2522L	680	1/2W	Ro	R724ab	RD0456	6.8K	1/3W	Rd
R704ab	RS2522L	680	1/2W	Ro	R725ab	RD0456	6.8K	1/3W	Rd
R705ab	RS2513L	120	1/2W	Ro	R726ab	RS2514L	150	1/2W	Rd
R706ab	RS2513L	120	1/2W	Ro	R727ab	RG0601	0.33	5W	Rc
R707ab	RD0441	120K	1/3W	Rd	R728ab	RD2530	6.8	1/2W	Rd
R708ab	RD0446	47K	1/3W	Rd	R729ab	RS5044LA	10	2W	Ro
R709ab	RD0476	150	1/3W	Rd	R730ab	RS2715LA	330	1W	Ro
R710ab	RD2594	3.3K	1/2W	Rd	R731ab	RD0453	12K	1/3W	Rd
R712ab	RD2618	33K	1/2W	Rd	R733ab	RD0489	10	1/3W	Rd
R713ab	RS2520L	470	1/2W	Ro	R734ab	RD0455	8.2K	1/3W	Rd
R714a	RD2620	39K	1/2W	Rd	R735	RD0466	1K	1/3W	Rd
R715ab	RS2501L	10	1/2W	Ro	R736	RD0460	3.3K	1/3W	Rd
R716ab	RS2514L	150	1/2W	Ro	R737	RD0464	1.5K	1/3W	Rd
R717a	RD2618	33K	1/2W	Rd	R738	RD0469	560	1/3W	Rd
R718ab	RD0467	820	1/3W	Rd	R739	RD0460	3.3K	1/3W	Rd
R719ab	RD0469	560	1/3W	Rd	R740	RD0441	120K	1/3W	Rd
R720ab	RS2508L	47	1/2W	Ro	R741ab	RD0480	68	1/3W	Rd

# PB-1362-1365 PARTS LIST

SYMBOL NO.	STOCK NO.	DESCRIPTION			REMARK	SYMBOL NO.	STOCK NO.	DESCRIPTION			REMARK
(Capacitor)											
C115	CE1702	100 $\mu$ F	6.3WV	E1		D701ab	TD0053	1S-2473			
C174	CE1721	100 $\mu$ F	16WV	E1		D702ab	TD0027	WZ-120 ZENER 12V			
C701ab	CC0006	47PF	50WV	Ce		D703ab	TV0026	STV-3H VARISTOR			
C702ab	CC0010	330PF	50WV	Ce		D704ab	TD0053	1S-2473			
C703ab	CE1717	10 $\mu$ F	16WV	E1		D705ab	TD0053	1S-2473			
C704ab	CM0114	22PF	500WV	Mi		D706ab	TD0053	1S-2473			
C705ab	CQ1319	0.033 $\mu$ F	50WV	My		D707ab	TD0053	1S-2473			
C706ab	CK0155	0.01 $\mu$ F	50WV	Ce		D708ab	TD0053	1S-2473			
C707ab	CK0155	0.01 $\mu$ F	50WV	Ce		D709ab	TD0053	1S-2473			
C708ab	CQ1315	0.015 $\mu$ F	50WV	My		D710ab	TD0002	1N-4002			
C709ab	CC0038	5PF	50WV	Ce		D711	TD0053	1S-2473			
C710ab	CE1701	47 $\mu$ F	6.3WV	E1		D712ab	TD0002	1N-4002			
C711ab	CQ1441	6800PF	50WV	St		D713	TD0160F	S3V-40 (F4)			
C712	CE1704	330 $\mu$ F	6.3WV	E1		D714	TD0160F	S3V-40 (F4)			
C713	CE1704	330 $\mu$ F	6.3WV	E1		D715	TD0160F	S3V-40 (F4)			
C716	CE1016	10000 $\mu$ F	56WV	E1		D716	TD0160F	S3V-40 (F4)			
C717	CE1016	10000 $\mu$ F	56WV	E1		D717	TD0142	S1VB-20			
C718	CQ2006	0.47 $\mu$ F	125WV	Fi		D718	TD0002	1N-4002			
C719	CQ2006	0.47 $\mu$ F	125WV	Fi							
C720	CE1761	470 $\mu$ F	50WV	E1							
C721	CE1761	470 $\mu$ F	50WV	E1							
(Switch)											
SW701ab	SS0138	Slide, SSR22351D				Q701ab	TF0014	2SK-129A			
SW702ab	SS0138	Slide, SSR22351D				Q702ab	TR0029	2SC-945			
(Trimming Potentiometer)											
VR701ab	RT0090	100 $\Omega$	(B)	SR1PR		Q703ab	TR0029	2SC-945			
VR702ab	RT0007	470 $\Omega$	(B)	SR1PR		Q704ab	TR0043	2SA-733			
(Fuse, Fuse Holder)											
F701	BF0206	5 x 20	0.5A(T)			Q705ab	TR0323	2SC-1845			
F702	BF0206	5 x 20	0.5A(T)			Q706ab	TR0320	2SA-992			
F703	BF0206	5 x 20	0.5A(T)			Q707ab	TR0237	2SA-949			
F701	AH0028	23165102-C				Q708ab	TR0029	2SC-945			
F702	AH0028	23165102-C				Q709ab	TR0236	2SC-2229			
F703	AH0028	23165102-C				Q710ab	TR0198	2SC-1815			
(Relay)											
RY701	AY0046	GZ-12H				Q711ab	TR0087	2SA-1015			
(Choke Coil)											
L701ab	LA1004	LUX-1004-2M/mH				Q712ab	TR0190	2SC-1624			
						Q713ab	TR0188	2SA-814			
						Q714ab	TR0295	2SC-2581			
						Q715ab	TR0294	2SA-1106			
						Q716	TR0029	2SC-945			
						Q717	TR0029	2SC-945			
						Q718	TR0320	2SA-992			
						Q719	TR0029	2SC-945			
						Q720ab	TR0259	2SC-2120			
(PCB Board)											
						PC1362	PB-1362				

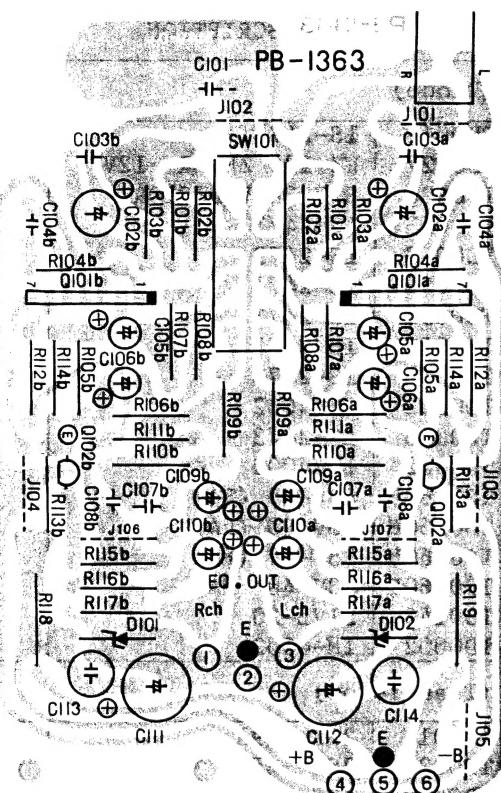
## PB-1365(HEAD PHONE)



(Resistor)				
R302ab	RD0440	150K	1/3W	R <sub>d</sub>
R303ab	RD0440	150K	1/3W	R <sub>d</sub>
(DIN Connector)				
	AS0205	5P		
(PCB Board)				
	PD1363	PB-1363, 4, 5, 6		

## PB-1363-1364 PARTS LIST

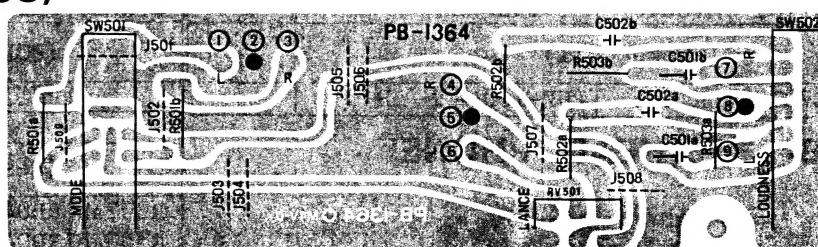
## PB-1363-EQUALIZER



SYMBOL NO.	STOCK NO.	DESCRIPTION	REMARK
(Switch)			
SW101	SS0139	Slide, SSR-24351D	
(Capacitor)			
C101	CK0157	0.047μF 25WV Ce	
C102ab	CE0781	22μF 35WV LR E1	
C103ab	CC0006	47PF 50WV Ce	
C104ab	CC0006	47PF 50WV Ce	
C105ab	CE0784	0.33μF 50WV LR E1	
C106ab	CE0784	0.33μF 50WV LR E1	
C107ab	CQ1617	3900PF 50WV My	

SYMBOL NO.	STOCK NO.	DESCRIPTION	REMARK
(Resistor) Unit: Ω			
R101ab	RD0474	220 1/3W Rd	
R102ab	RD0434	470K 1/3W Rd	
R103ab	RD0446	47K 1/3W Rd	
R104ab	RD0472	330 1/3W Rd	
R105ab	RD0474	220 1/3W Rd	
R106ab	RD0483	39 1/3W Rd	
R107ab	RD0434	470K 1/3W Rd	
R108ab	RD0434	470K 1/3W Rd	
R109ab	RD0470	470 1/3W Rd	
R110ab	RD0451	18K 1/3W Rd	
R111ab	RD2137	200K 1/3W Rd	
R112ab	RD0470	470 1/3W Rd	
R113ab	RD0454	10K 1/3W Rd	
R114ab	RD0456	6.8K 1/3W Rd	
R115ab	RD0443	82K 1/3W Rd	
R116ab	RD0469	560 1/3W Rd	
R117ab	RD0438	220K 1/3W Rd	
R118	RS2746LA	560 1W Ro	
R119	RS2746LA	560 1W Ro	
(Zener)			
D101	TD0210	BZ-260 26V	
D102	TD0210	BZ-260 26V	
(IC, Transistor)			
Q101ab	TC0179	M-5214L	
Q102ab	TR0320	2SA-992	
(PCB Board)			
	PD1363	PB-1363, 4, 5, 6	

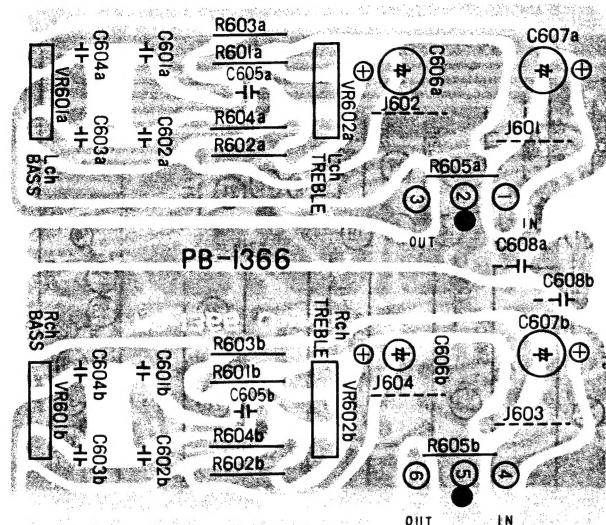
## PB-1364-MODE, LOUDNESS, BALANCE CONTROL



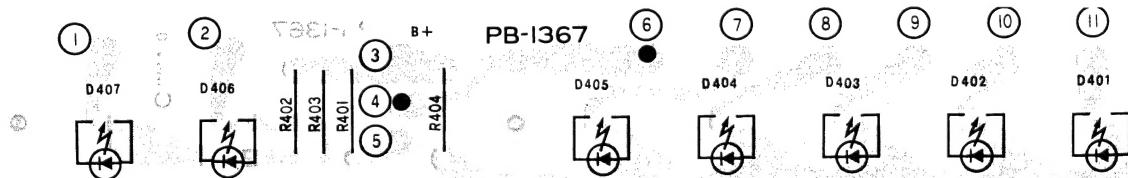
(Switch, Potentiometer)			(Resistor, Capacitor, PCB Board)		
SW501ab	SP0182	Push, SUF-12(9250)	R501ab	RD0456	6.8KΩ 1/3W Rd
SW502ab	SP0183	Push, SUFR-22	R503ab	RD0456	6.8KΩ 1/3W Rd
VR501ab	RV0275	250K 1Z	C501ab	CQ1323	0.068μF 50WV My
				PD1363	PB-1363, 4, 5, 6

# PB-1366 • 1367 • 1368 PARTS LIST

## PB-1366-TONE CONTROL

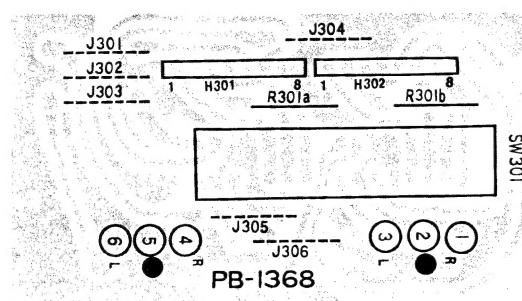


## PB-1367-LED, PILOT



SYMBOL NO.	STOCK NO.	DESCRIPTION	REMARK
(Resistor) Unit: $\Omega$			
R401	RD0463	1.8K 1/3W	Rd
R402	RD0467	820 1/3W	Rd
R403	RD0467	820 1/3W	Rd
R404	RD0463	1.8K 1/3W	Rd
(PCB Board)			
PD1368	PB-1367, 8, 9		

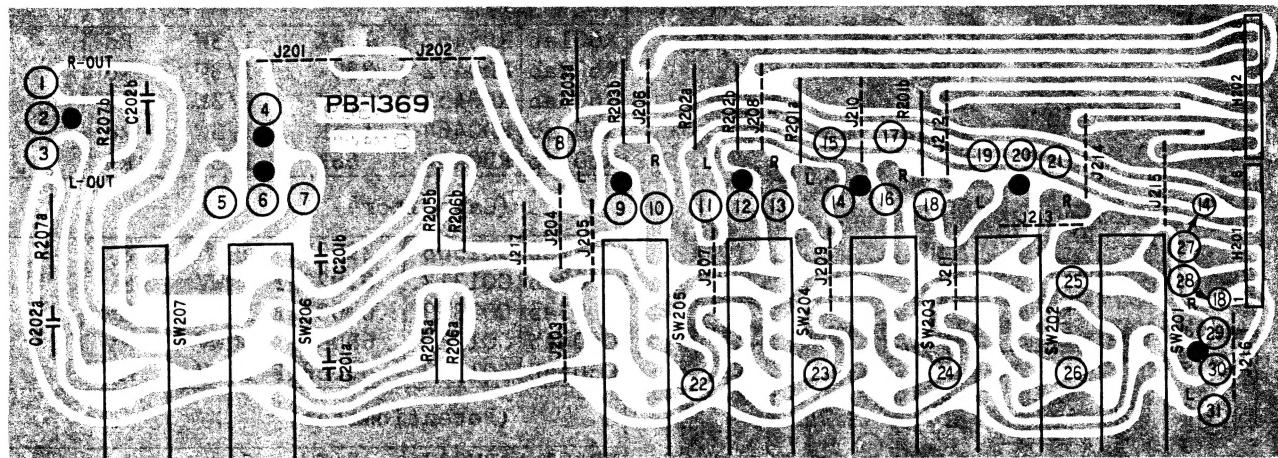
## PB-1368-REC SELECTOR



SYMBOL NO.	STOCK NO.	DESCRIPTION	REMARK
(Resistor) Unit: $\Omega$			
R601ab	RD0463	1.8K 1/3W	Rd
R602ab	RD0472	330 1/3W	Rd
R603ab	RD0455	8.2K 1/3W	Rd
R604ab	RD0464	1.5K 1/3W	Rd
R605ab	RD0444	68K 1/3W	Rd
(Capacitor)			
C601ab	CQ1308	3900PF 50WV	My
C602ab	CQ1317	0.022 $\mu$ F 50WV	My
C603ab	CQ1319	0.033 $\mu$ F 50WV	My
C604ab	CQ1311	6800PF 50WV	My
C605ab	CQ1323	0.068 $\mu$ F 50WV	My
(Potentiometer)			
VR601ab	RV0276	50 $\Omega$ C	
VR602ab	RV0276	50 $\Omega$ C	
(PCB Board)			
PD1363	PB-1363, 4, 5, 6		

(Switch)			
SW301a			
SW301d	SR0152	Rotary, SRZW-46N	
(Resistor)			
R301ab	RD0430	1M $\Omega$ 1/3W	Rd
(PCB Board)			
PD1368	PB-1367, 8, 9		

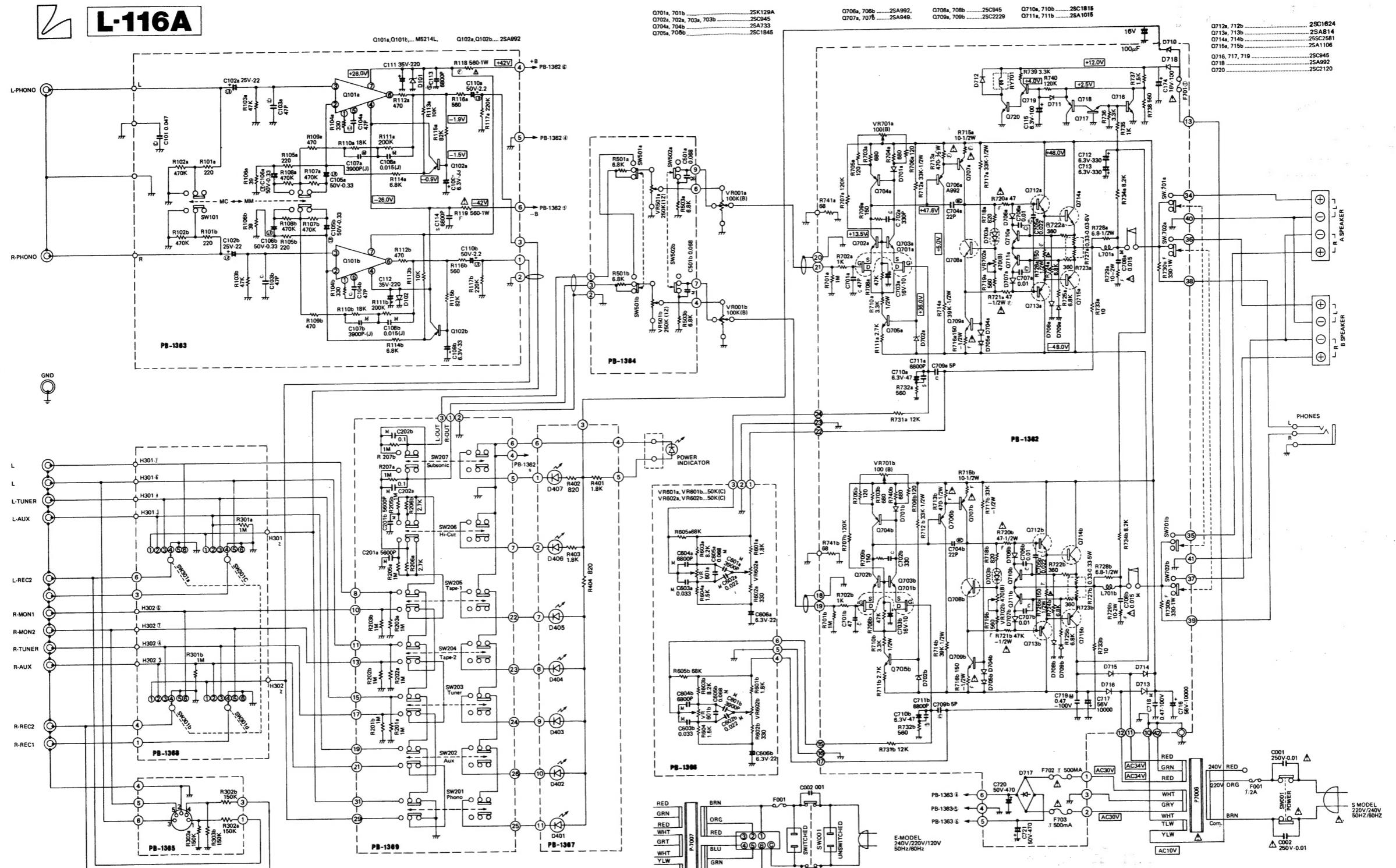
## PB-1369-INPUT SELECTOR,HIGH CUT,SUBSONIC



## PB-1369 PARTS LIST

SYMBOL NO.	STOCK NO.	DESCRIPTION			REMARK
(Resistor)					
R201ab	RD0430	1M	1/3W	Rd	
R202ab	RD0430	1M	1/3W	Rd	
R203ab	RD0430	1M	1/3W	Rd	
R205ab	RD0430	1M	1/3W	Rd	
R206ab	RD0461	2.7K	1/3W	Rd	
R207ab	RD0430	1M	1/3W	Rd	
(PCB Board)					
	PD1368	PB-1367, 8, 9			

SYMBOL NO.	STOCK NO.	DESCRIPTION			REMARK
(Capacitor)					
C201ab	CQ1310	5600PF	50WV	My	
C202ab	CQ1325	0.1 $\mu$ F	50WV	My	
(Switch)					
SW201					
SW207	SP0184	Push, SUF-73			



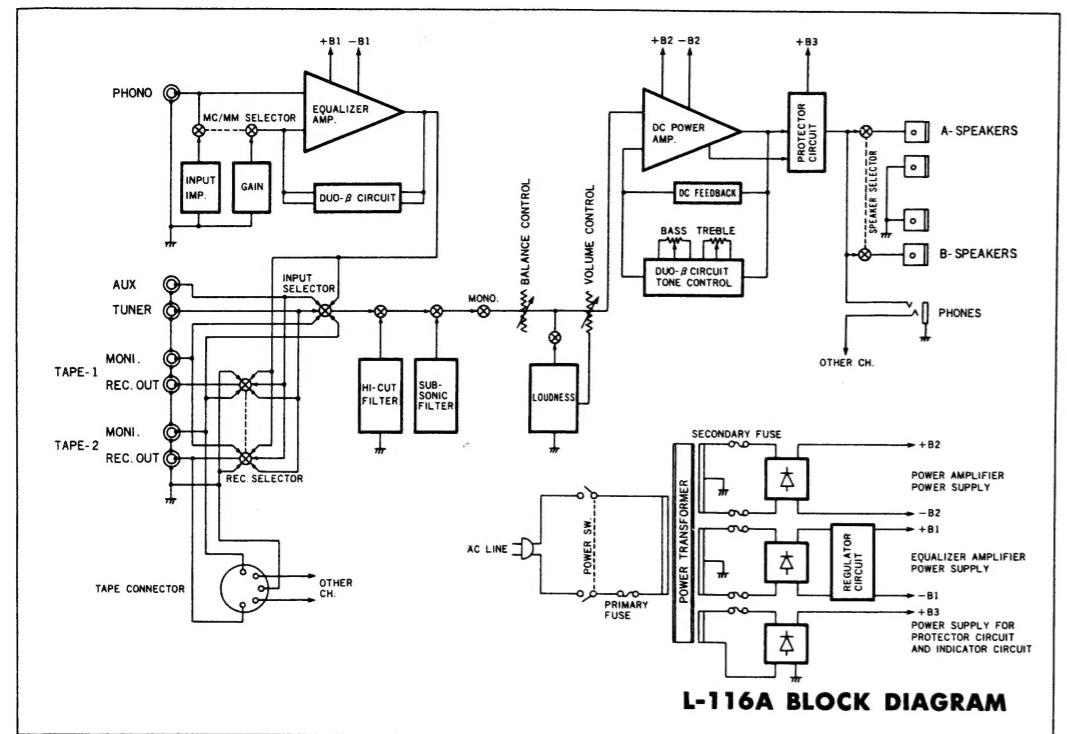
NOTE	PCB. NO.	SELECTOR	CONTROLLER
	PB-1362	SW-701 (a, b) ..... SPEAKERS A	
		SW-702 (a, b) ..... SPEAKERS B	
	PB-1363	SW-101 (a, b, c, d) ..... MM/MC SELECTOR	
	PB-1364	SW-501 (a, b) ..... MODE	VR-501 (a, b) ..... BALANCE
		SW-502 (a, b) ..... LOUDNESS	
	PB-1366		VR-601a, VR-601b ..... BASS
			VR-602a, VR-601b ..... TREBLE
	PB-1368	SW-301 (a, b, c, d) ..... REC. SELECTOR	
	PB-1369	SW-201, 202, 203, 204, 205 ..... INPUT SELECTOR	
		SW-206 ..... HI-CUT FILTER	
		SW-207 ..... SUB-SONIC FILTER	
			VR-001 (a, b) ..... VOLUME

1. All resistors are in OHM, 1/4 - watt, unless otherwise specified.  
F Flame-proof resistors
2. All Capacitors are in  $\mu$ F, unless otherwise specified.  
- Electrolytic capacitors  
M Polyester film Capacitors, voltage rating 50v  
C Ceramic Capacitors, voltage rating 50v  
S Polystyrene film capacitors, voltage rating 50v.  
MC Dipped mica film capacitors, voltage rating 50v.  
LR Low-leak, electrolytic capacitors
3. Transistors and Diodes may be replaced with any types having comparable ratings.
4.  DC voltage, no input signal
5. Due to continued improvements LUX reserve the right to alter the design or the specifications.

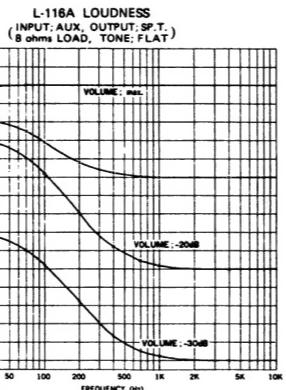
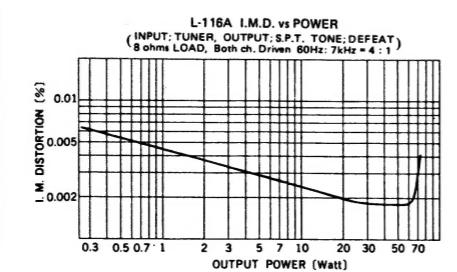
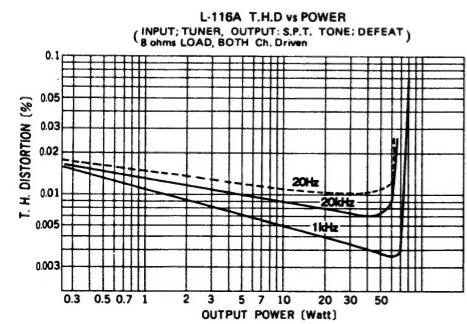
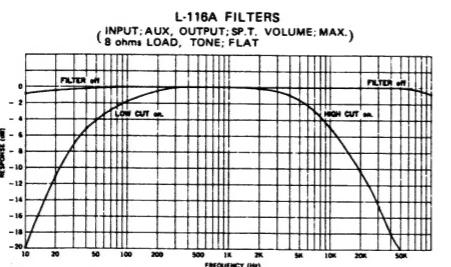
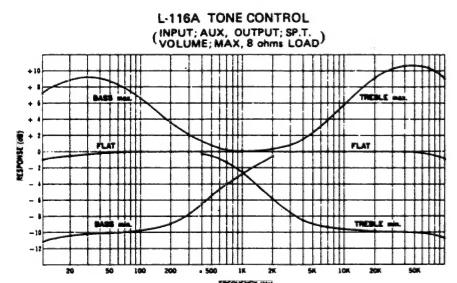
Bottom View	NPN	PNP	V <sub>CEO</sub>	V <sub>CEO</sub>	I <sub>C</sub> (DC)	P <sub>C</sub>	T <sub>J</sub>	T (TYP) (NPN/PNP)
 <b>E C B</b> 	2SC945	2SA733	60V	50V	100mA	250mW	125°C	250MHz/180MHz
	2SC1845	2SA992	120V	120V	50mA	500mW	125°C	110MHz/100MHz
	2SC2229	2SA949	150V	150V	50mA	800mW	150°C	120MHz/120MHz
	2SC2120	—	35V	30V	800mA	500mW	150°C	120MHz
	2SC2238	2SA968	160V	160V	1.5A	25W	150°C	100MHz/100MHz
 <b>E C B</b> 	2SC2581	2SA1106	140V	140V		100W	150°C	
	2SK129A							
 <b>M5214L</b>				 <b>M5214L</b>				
 <b>M5214L</b>				 <b>M5214L</b>				

odes	Symbol No.
D701a, D701b, D704a, D704b, D707a	
D705a, D705b, D706a, D706b, D707b	
D708a, D708b, D709a, D709b, D711	
D702a, D702b	Zener diode
D703a, D703b	Varistor
D710, D718	
D717	
D713, D714, D715, D716	
D101, D102	Zener diode

## BLOCK DIAGRAMME



## STANDARD CURVES



**LUX CORPORATION, JAPAN**

1-1, 1-CHOME, SHINSENI-NISHIMACHI, TOYONAKA-SHI, OSAKA  
PHONES: 06-834-0004 CABLE: LUXMAN TOYONAKA TELEX: J63694